

# CDAT Utilities 3.3 TOC

## CDAT Utilities Reference Guide

### Version 3.3

PCMDI Computational Support

Program for Climate Model Diagnosis and Intercomparison (PCMDI)  
Lawrence Livermore National Laboratory  
Livermore, CA 94550  
United States of America

<http://cdat.sf.net>

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### CHAPTER 1 Climate Data Specific Utilities: The cdutil Package

- Spatial Averaging. Area weighting, domain definition
  - ◆ Spatial averaging using the averager function

- ◆ Computing Weights using area weights.
  - ◆ Defining precise domains:
- Temporal Averaging
  - ◆ Predefined time averaging functions
  - ◆ Creating Custom Seasons
  - ◆ Specifying time periods for climatologies.
  - ◆ Specifying Data Coverage Criteria
- Preparing Datasets for Comparison (VariableConditioner and VariablesMatcher)
  - ◆ Introduction.
  - ◆ Description of supporting objects.
  - ◆ Examples

## CHAPTER 2 General Utilities : The genutil Package

- Statistics Functions
  - ◆ correlation
  - ◆ covariance
  - ◆ autocorrelation
  - ◆ autocovariance
  - ◆ laggedcorrelation
  - ◆ laggedcovariance
  - ◆ meanabsdiff
  - ◆ rms
  - ◆ std
  - ◆ variance
  - ◆ geometricmean
  - ◆ percentiles
  - ◆ median
  - ◆ linearregression
- The xmgrace module
- Additional convenience functions
  - ◆ minmax
  - ◆ grower
  - ◆ rgb2str
  - ◆ str2rgb

## CHAPTER 3 User Contributed Packages

- Reading ASCII text files (package asciidata)
- Reading binary data (package binaryio)
- Explicit Orthonormal Functions (package eof)
- Computing L-moments (package lmoments)
- Regridding using package regridpack
- Using Spherepack (package sphere)
- Computing Trends (package trends)
- Reading data from an Oort file (package ort)
- A grads like interface (package grads)
- Interface to the ngmath library. (package ngmath)

## CHAPTER 1 Climate Data Specific Utilities: The cdutil Package

## CHAPTER 2 General Utilities : The genutil Package

